

IN THE CLAIMS:

The following is a complete listing of the claims in this application, reflects all changes currently being made to the claims, and replaces all earlier versions and all earlier listings of the claims:

Claim 1. (Currently Amended) An image pickup apparatus, comprising:

an output unit which outputs a first electric signal corresponding to a first light flux included in light fluxes respectively from different areas ~~of dividing~~ an exit pupil area of an imaging optical system, and a second electric signal corresponding to a second light flux different from the first light flux, included in the light fluxes; and

a plurality of pixel units each including a first sensitive area for outputting the first electric signal, and a second sensitive area for outputting the second electric signal,

wherein a sensitivity distribution of the first sensitive area and a sensitivity distribution of the second sensitive area overlap each other.

Claim 2. (Withdrawn) An apparatus according to claim 1, wherein said plurality of pixel units includes at least two types of pixel units having different separation directions of said first and second photoelectric conversion units.

Claim 3. (Withdrawn) An apparatus according to claim 1, wherein said plurality of pixel units includes at least two types of pixel units having different sensitivity regions.

Claim 4. (Previously Presented) An apparatus according to claim 1, wherein the first and second sensitive areas are formed on the basis of an F-number of the imaging optical system in detection of focus.

Claim 5. (Withdrawn) An apparatus according to claim 1, wherein each of the pixel units has a common amplification element adapted to amplify and output a signal from the first photoelectric conversion unit and a signal from the second photoelectric conversion unit, a first transfer switch adapted to transfer the signal from said first photoelectric conversion unit to said common amplification element, and a second transfer switch adapted to transfer the signal from said second photoelectric conversion unit to said common amplification element.

Claim 6. (Withdrawn) An apparatus according to claim 5, further comprising a drive circuit adapted to control a first mode in which the signals from said first and second photoelectric conversion units are added by an input unit of said common amplification element and output, and a second mode in which the signals said the first and second photoelectric conversion units are independently output from said common amplification element.

Claim 7. (Withdrawn) An apparatus according to claim 1, further comprising

- an A/D conversion circuit adapted to convert a signal from the image pickup element into a digital signal, and
- a digital signal processing circuit adapted to process the signal from said A/D conversion circuit.

Claim 8. (Withdrawn) An image pickup apparatus comprising:

- a first semiconductor region having a first conductivity type;
- a second semiconductor region formed in said first semiconductor region and having a second conductivity type different from the first conductivity type;
- a third semiconductor region formed in said first semiconductor region and having the second conductivity type different from the first conductivity type, wherein said second and third semiconductor regions are photoelectric conversion units formed adjacent to each other, and
- a fourth semiconductor region having the first conductivity type is formed between said second semiconductor region and said first semiconductor region, wherein said third semiconductor region is formed under an opening.

Claim 9. (Withdrawn) An apparatus according to claim 8, wherein a common microlens is arranged over said second and third semiconductor regions.

Claim 10. (Withdrawn) An apparatus according to claim 8, further comprising

an A/D conversion circuit adapted to convert a signal from said image pickup element into a digital signal, and

a digital signal processing circuit adapted to process the signal from said A/D conversion circuit.

Claim 11. (Withdrawn) An image pickup apparatus comprising:

a plurality of pixel units each including a first photoelectric conversion unit for photoelectrically converting a first light component of a light beam that has separated an exit pupil of an imaging optical system into a plurality of parts, and a second photoelectric conversion unit for photoelectrically converting a second light component different from the first light component; and

a processing circuit adapted to execute focus adjustment on the basis of a first sensitivity distribution including a sensitivity distribution of the first photoelectric conversion unit and a second sensitivity distribution including a sensitivity distribution of the second photoelectric conversion unit, the sensitivity distributions partially overlapping each other.

Claim 12. (Withdrawn) An apparatus according to claim 11, further comprising

an A/D conversion circuit adapted to convert a signal from the image pickup element into a digital signal, and
a digital signal processing circuit adapted to process the signal from said A/D conversion circuit.